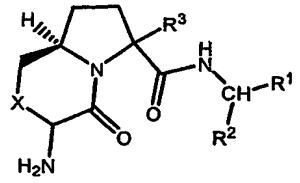
What is claimed is:

1. A compound having the formula:



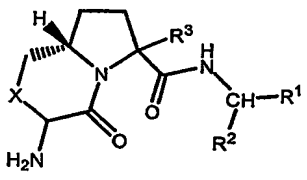
or a pharmaceutically acceptable salt or hydrate thereof, wherein

R^1 and R^2 are independently selected from the group consisting of -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

R^3 is selected from the group consisting of –H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_3.

2. A compound having the formula:



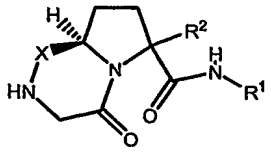
or a pharmaceutically acceptable salt or hydrate thereof, wherein

R^1 and R^2 are independently selected from the group consisting of -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

R^3 is selected from the group consisting of –H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_3.

3. A compound having the formula:



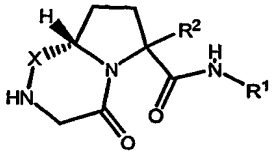
or a pharmaceutically acceptable salt or hydrate thereof, wherein

R^1 and R^2 are independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is

independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_4.

4. A compound having the formula:

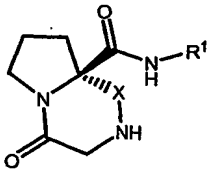


or a pharmaceutically acceptable salt or hydrate thereof, wherein

R^1 and R^2 are independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_4.

5. A compound having the formula:



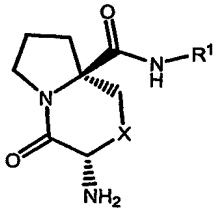
or a pharmaceutically acceptable salt or hydrate thereof, wherein

R is independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted

arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_4.

6. A compound having the formula:

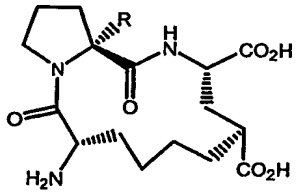


or a pharmaceutically acceptable salt or hydrate thereof, wherein

R is independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl and;

X is a linear alkyl or alkenyl chain of C_0-C_4.

7. A compound having the formula:

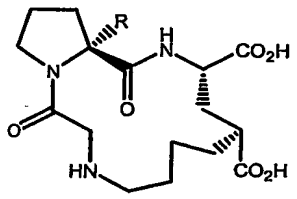


or a pharmaceutically acceptable salt or hydrate thereof, wherein

R is independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R',

trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl.

8. A compound having the formula:



or a pharmaceutically acceptable salt or hydrate thereof, wherein

R is independently selected from the group consisting of -H, -OR', -SR', -NR'R', $-NO_2$, -CN, -C(O)R', -C(O)OR', -C(O)NR'R', -C(NR')NR'R', trihalomethyl, halogen, alkyl, substituted alkyl, heteroalkyl, substituted heteroalkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, substituted arylalkyl, heteroarylalkyl and substituted heteroarylalkyl; each R' is independently selected from the group consisting of –H, alkyl, heteroalkyl, alkenyl, alkynyl, aryl, arylalkyl, heteroaryl and heteroarylalkyl.

9. A compound of Formula 1 where R^1 = –COOH and R^2= $-(CH_2)_2$-COOH.

10. A compound of Formula 3 where R^1 =–CH(COOH)-$(CH_2)_2$-COOH.

11. A compound of Formula 1 where R^3 = methyl or Formula 3 where R^2 =methyl.

12. A compound of Formula 1 where R^3 = allyl or Formula 3 where R^2 =allyl.

13. A compound of Formula 1 or Formula 3 where X = $-(CH_2)_3-$.

14. A compound of Formula 1 where X= $-(CH_2)_2-$.

15. A compound of Formula 3 where X = $-(CH_2)_4-$.

16. A compound of Formula 1 where X= $-CH_2-CH=CH-$, (where the CH_2 of X is adjacent to the carbon attached to the NH_2 group).

17. A compound of Formula 3 where X = $-CH_2-CH=CH-CH_2-$

18. A compound of Formula 1 where R^1= –COOH; R^2 = $-(CH_2)_2$-COOH; R^3= H; X= $-(CH_2)_3-$

19. A compound of Formula 3 where R^1= –CH(COOH)-$(CH_2)_2$-COOH; R^2=H; X= $-(CH_2)_4-$

20. A pharmaceutical composition comprising a compound of one or more of Formula 1, Formula 2, Formula 3 or Formula 4, Formula 5, Formula 6, Formula 7 or Formula 8 and a pharmaceutically acceptable excipient.

21. A pharmaceutical composition comprising a compound of one or more of Formula 1, Formula 2, Formula 3 or Formula 4, Formula 5, Formula 6, Formula 7 or Formula 8, a pharmaceutically acceptable excipient and a binder.

22. A pharmaceutical composition comprising a compound of one or more of Formula 1, Formula 2, Formula 3 or Formula 4, Formula 5, Formula 6, Formula 7 or Formula 8, a pharmaceutically acceptable excipient and a capsule.

23. A method of treating a patient to protect neurons otherwise destined to degenerate or die as a result of an injury or disease, comprising administering to a patient an effective amount of one or more compounds of Formula 1, Formula 2, Formula 3 or Formula 4, Formula 5, Formula 6, Formula 7 or Formula 8.

24. The method of claim 23, wherein the disease is characterized by apoptotic neuronal death.

25. The method of claim 23, wherein the disease is characterized by necrotic neuronal cell death.

26. The method of claim 23, wherein the disease is characterized by neuronal cell degeneration.

27. The method of claim 23, wherein the injury results in necrotic neuronal cell death.

28. The method of claim 23, wherein the injury results in apoptotic neuronal cell death.

29. The method of claim 23, wherein the injury results in neuronal cell degeneration.

30. The method of claim 23, wherein the disease is selected from the group consisting of Huntington's disease, Alzheimer's disease, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, peripheral neuropathy, spinal

muscular atrophy, Creutzfeldt-Jakob disease, AIDS dementia, progressive supranuclear palsy, myelinopathia centralis diffusa (vanishing white matter disease), chronic neurodegenerative disease, Down's syndrome, leukoencephalopathy and Schilder's disease.

31. The method of claim 23, wherein the injury or disease is a result of one or more conditions selected from the group consisting of neuroblastoma, head injury, traumatic brain injury, stroke, ischemic injury, hypoxic injury, reperfusion injury, epilepsy, cardiac artery bypass graft surgery, toxin damage, radiation damage and asphyxia.

32. The method of claim 23, wherein the injury or disease is a result of an inflammatory condition.

33. The method of claim 23, wherein the injury or disease is a result of one or more conditions selected from the group consisting of chronic or acute encephalomyelitis, encephalitis, optic neuritis, transverse myelitis, meningitis, panencephalitis, Devic's disease, progressive multifocal leukoencephalopathy, central pontine myelinolysis and neuromyelitis optica.

34. The method of claim 23, wherein the disease is a result of schizophrenia or depression.

35. A method of claim 23, wherein at least one other anti-apoptotic, anti-necrotic or neuroprotective agent is administered.

36. The method of claim 35 where the other anti-apoptotic or neuroprotective agent is selected from selected from growth factors and associated derivatives (insulin-like growth factor-I [IGF-I], insulin-like growth factor-II [IGF-II], transforming growth factor-β1, activin, growth hormone,

nerve growth factor, growth hormone binding protein, IGF-binding proteins [especially IGFBP-3], basic fibroblast growth factor, acidic fibroblast growth factor, the hst/Kfgk gene product, FGF-3, FGF-4, FGF-6, keratinocyte growth factor, androgen-induced growth factor, int-2, fibroblast growth factor homologous factor-1 (FHF-1), FHF-2, FHF-3 and FHF-4, karatinocyte growth factor 2, glial-activating factor, FGF-10 and FGF-16, ciliary neurotrophic factor, brain derived growth factor, neurotrophin 3, neurotrophin 4, bone morphogenetic protein 2 [BMP-2], glial-cell line derived neurotrophic factor, activity-dependant neurotrophic factor, cytokine leukaemia inhibiting factor, oncostatin M, an interleukin, α- interferon, β- interferon, γ- interferon, consensus interferon, TNF-α, clomethiazole; kynurenic acid, Semax, tacrolimus, L-threo-1-phenyl-2-decanoylamino-3-morpholino-1-propanol, adrenocorticotropin-(4-9) analogue [ORG 2766], dizolcipine [MK-801], selegiline, a glutamate antagonist, an AMPA antagonist and an anti-inflammatory agent.

37. The method of claim 36 wherein said glutamate antagonist is selected from the group consisting of NPS1506, GV1505260, MK-801 and GV150526.

38. The method of claim 36 wherein said AMPA antagonist is selected from the group consisting of 2,3-dihydroxy-6-nitro-7-sulfamoylbenzo(f)quinoxaline (NBQX), LY303070 and LY300164.

39. The method of claim 36, wherein said anti-inflammatory agent is selected from the group consisting of an anti-MAdCAM-1 antibody and an antibody against an integrin α4β1 receptor and an integrin α4β7 receptor.

40. The method of claim 39 wherein said anti-MAdCAM-1 antibody is MECA-367.

41. The method of claim 23 where the compound is (2S, 3'S, 8'R, 11'S) 2-{[(3'-Amino-1'-aza -2'-oxobicyclo[6.3.0]-undecyl)-11'-carbonyl]amino}-1,5-pentanedioic acid trifluoroacetate salt (48).

42. The method of claim 23 where the compound is (2S, 9'R, 12'S)-2-{[(1',4'-Diaza-2'-oxobicyclo[7.3.0]dodecyl)-12'-carbonyl]amino}-1,5-pentanedioic acid trifluoroacetate (68).

43. The method of claim 23, wherein said condition is hypoxic eschemia.

44. The method of claim 23, wherein said condition is neurotoxicity.